

A Mosquito Taxonomic Glossary  
XII. The Larval Labiohypopharynx\*

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For a full explanation of this project see Part I (Knight 1970). As before, terms recommended for standardized use are given fully capitalized; synonyms or terms used in error are in lower case and underlined; standardized abbreviations are suggested; and an appendix presenting supplementary information is included.

Readers are reminded that this is a preliminary presentation and that when all parts are completed, they will be thoroughly revised and issued under a single cover. Because of this, individuals interested in mosquito systematics and morphology are encouraged to comment on any portion of the included text with which they take exception.

Part XI of this series was the second of a sequence dealing with the larval mouthparts (Harbach and Knight 1977). As previously, the illustrations were drawn from specimens observed with the light and scanning electron microscopes. Specifically, the lateral aspects of the labiohypopharynges were drawn from SEM micrographs.

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ACCESSORY DENTAL PROCESSES (ADP). -- In certain culicine larvae, a group of nodule-, tooth-, spine-, or hair-like cuticular projections located lateroventral to the lateral prelabial teeth of the labiohypopharynx. (Syn.: lateral premental plate, Gardner *et al.* 1973, 171.) See appendix.

alate expansion of the base of the cibarial bar. -- See DORSAL RAMUS.

anterior crests. -- See PRELABIAL OUTGROWTHS.

anterior organ. -- See PRELABIAL OUTGROWTHS.

anterolateral toothed premental plate. -- See LATERAL PRELABIAL TEETH 1.

apical papillae. -- See PRELABIAL SENSORIUM 2 and PRELABIAL SENSORIUM 3.

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- apical premental papilla. -- See PRELABIAL SENSORIUM 2 and PRELABIAL SENSORIUM 3.
- apically serrated hairs. -- See PRELABIAL OUTGROWTHS.
- appendages. -- See PRELABIAL SENSORIUM.
- arch of heavy chitin. -- See HYPOPHARYNX.
- basal papillae. -- See PRELABIAL SENSORIUM 5.
- basal premental papilla. -- See PRELABIAL SENSORIUM 5.
- basiconic sensilla. -- See PRELABIAL SENSORIUM.
- bi-apical dens. -- See PRELABIAL CROWN.
- blunt anterior processes. -- See PRELABIAL SENSORIUM 1.
- caudal arm. -- See PRELABIAL CROWN.
- caudal group [of spiny blade-like structures]. -- See LATERAL PRELABIAL TEETH 3.
- caudal row [of spines]. -- See LATERAL PRELABIAL TEETH 3.
- caudal spines. -- See PRELABIAL OUTGROWTHS.
- caudo-lateral group of spines. -- See LATERAL PRELABIAL TEETH 3.
- caudo-lateral region of each paragnathus. -- See LATERAL PRELABIAL TEETH.
- central brush of spines. -- See PRELABIAL OUTGROWTHS.
- central cusps. -- See PRELABIAL DENTICULUS.
- central process. -- See PRELABIAL CROWN.
- cephalic group [of spiny blade-like structures]. -- See LATERAL PRELABIAL TEETH 1.
- cephalic lateral group of spines. -- See LATERAL PRELABIAL TEETH 1.
- cephalic row [of spines]. -- See LATERAL PRELABIAL TEETH 1 and LATERAL PRELABIAL TEETH 2.
- cephalo-lateral ends. -- See LATERAL PRELABIAL TEETH.
- chitinous cover. -- See HYPOPHARYNGEAL BAR.
- chitinous lamella. -- See PRELABIAL CORDATE PROCESS.
- circle of hairs. -- See PRELABIAL OUTGROWTHS.
- circular pigmented area. -- See PRELABIAL MEMBRANOUS AREA.
- clear circular areas. -- See PRELABIAL MEMBRANOUS AREA.
- clear patches. -- See PRELABIAL MEMBRANOUS AREA.

curved plate with spines. -- See PRELABIAL CUSPS and PRELABIAL DENTAL ARCH.

dens of diametrical ring. -- See LATERAL PRELABIAL TEETH.

dorsal fossa. -- See PRELABIAL DENTAL ARCH.

DORSAL PRELABIAL TEETH (DPT). -- In some dixid and culicine larvae, a row or series of tooth-like projections located on either side of the midline of the labiohypopharynx immediately ventral to the salivary slit; sometimes borne on a ridge as in certain *Uranotaenia* larvae; prelabial sensorium 1 is sometimes closely associated with or lies near the ventral margin of the teeth. See appendix.

dorsal premental papillae. -- See PRELABIAL SENSORIUM 2 and PRELABIAL SENSORIUM 3.

dorsal premental plate. -- See LATERAL PRELABIAL TEETH 1.

DORSAL RAMUS (Dra). -- In dixid and anopheline larvae, a rod-like structure joining the cibarial bars immediately dorsal to the hypopharyngeal component of the labiohypopharynx; in most culicine larvae, the dorsal rami are not fused, but when viewed from a certain angle the hypopharyngeal bar sometimes obscures the rami and appears to join the cibarial bars. (Syn.: alate expansion of the base of the cibarial bar, Chaudonneret 1962, 485.)

ear-shaped lateral lobes. -- See lobe-like structures.

fimbriae. -- See PRELABIAL OUTGROWTHS.

finger-form organ. -- See PRELABIAL DENTAL LAMELLA.

glossa. -- See LATERAL PRELABIAL TEETH, PRELABIAL DENTICULLUS, PRELABIAL CROWN, and PRELABIAL RIDGE TEETH.

hairs. -- See PRELABIAL OUTGROWTHS and PRELABIAL SENSORIUM.

heart-shaped flap. -- See PRELABIAL CORDATE PROCESS.

heart-shaped structure. -- See PRELABIAL CORDATE PROCESS.

hypopharyngeal apodemes. -- See PRELABIAL APODEME.

hypopharyngeal area. -- See HYPOPHARYNGEAL BAR.

HYPOPHARYNGEAL BAR (HyB). -- In some culicid larvae, a sclerotized rod-like internal structure of the hypopharyngeal component of the labiohypopharynx; sometimes a complete loop-like rod around the salivary slit, e.g., in *Eretmapodites*, but the ventral half of the loop is usually not attached to the dorsal half, weakly developed, and/or absent; lending support to the fleshy lobe of the hypopharynx. (Syn.: upper salivary plate, Chaudonneret 1962, 482; chitinous cover, Pao and Knight 1970, 132.) The "hypopharyngeal area" of Cook (1944, Fig. 23A, 56) and the "chitinous cover" of Gardner *et al.* (1973, 170) are

thought to be the hypopharyngeal bar although the structures so labelled in their figures appear to be the fused dorsal rami of the cibarial bars. See appendix.

hypopharyngeal body. -- See LABIOHYPOPHARYNX.

hypopharyngeal complex. -- See LABIOHYPOPHARYNX.

hypopharyngeal lobe. -- See HYPOPHARYNX.

HYPOPHARYNGEAL MALA (HyM). -- In dixid larvae, one of a pair of denticulate tritural surfaces situated on either side of the hypopharyngeal component of the labiohypopharynx; functionally but not structurally homologous with the prelabial mala of certain culicids; the accessory teeth of the mandibles occlude with the hypopharyngeal malae. (Syn.: lateral surface, Schremmer 1950, 403.) See appendix entry, MALA.

hypopharyngeal peglike processes. -- See PRELABIAL SENSORIUM 1.

hypopharyngeal processes. -- See PRELABIAL SENSORIUM 1.

hypopharyngeal sclerite. -- See HYPOPHARYNX.

hypopharyngeal spines. -- See PRELABIAL CUSPS, PRELABIAL MALA, and PRELABIAL SENSORIUM 1.

hypopharynx. -- See LABIOHYPOPHARYNX and prementum.

HYPOPHARYNX (Hy). -- In most insects, "the median postoral lobe of the ventral wall of the gnathal region of the head anterior to the labium" (Snodgrass 1935, 127). In culicid, dixid, and certain other nematoceros larvae, separated from the prelabium by the salivary slit, but united with it lateroposteriorly by the cibarial bars to form the labiohypopharynx. (Syn.: arch of heavy chitin, Thompson 1905, 170; hypopharyngeal sclerite, Thompson 1905, in Figs. 31, 32, 36; main dorsal part, Shalaby 1957d, in part, 268; hypopharyngeal lobe, Chance 1970, 259.) The "hypopharynx" of some authors, e.g., Snodgrass (1959, 19) and Pao and Knight (1970, 132), included that part of the labiohypopharynx dorsal to the lateral and median prelabial teeth, or homologous structures. See appendix entry, LABIOHYPOPHARYNX.

inferior part of the pharynx. -- See LABIOHYPOPHARYNX.

intermediate region [of each paragnathus]. -- See PRELABIAL MEMBRANOUS AREA.

intermediate row [of spines]. -- See LATERAL PRELABIAL TEETH 2.

labial and hypopharyngeal rudiments. -- See LABIOHYPOPHARYNX.

labial lobe. -- See prementum.

labial palp. -- See PRELABIAL MEMBRANOUS AREA.

labial palpi. -- See PRELABIAL CORDATE PROCESS.

labial plate. -- See prementum.

labial plates. -- See LATERAL PRELABIAL TEETH.

labial sensilla. -- See PRELABIAL SENSORIUM.

labial setae. -- See LATERAL PRELABIAL TEETH and PRELABIAL OUTGROWTHS.

labial teeth. -- See PRELABIAL DENTICULUS.

labio-hypopharyngeal body. -- See LABIOHYPOPHARYNX.

labio-hypopharyngeal complex. -- See LABIOHYPOPHARYNX.

labiohypopharyngeal complex. -- See LABIOHYPOPHARYNX.

LABIOHYPOPHARYNX (LbHy). -- In culicid (Snodgrass 1959, 21) and certain other nematoceros larvae, the protruding surface located between the mouth and the dorsomentum; comprising the prelabium and hypopharynx which are joined and supported by the cibarial bars from the lateral cranial walls; forming the ventroposterior wall of the preoral cavity. (Syn.: inferior part of the pharynx, Meinert 1886, 490; pharyngeal plate, Meinert 1886, 493; hypopharynx, Johannsen 1903, 401 and some later authors including Shalaby; labium, Wesché 1910, 12; hypopharyngeal body, Schremmer 1949, 186; hypopharyngeal complex, Schremmer 1949, 199; labium-hypopharyngeal complex, Schremmer 1950, 402; labio-hypopharyngeal body, Menees 1958, 27; labiohypopharyngeal complex, Gouin 1959, 190; labium and hypopharynx, Christophers 1960, 205; labial and hypopharyngeal rudiments, Christophers 1960, 206; labio-hypopharyngeal complex, Chance 1970, 260; prementohypopharyngeal complex, Saether 1971, 1257.) The "prementum" of Farnsworth (1947, 144) included all but the prelabial outgrowths, prelabial cordate process, and the prelabial dental lamellae found in anophelines. See appendix.

labium. -- See LABIOHYPOPHARYNX and prementum.

labium and hypopharynx. -- See LABIOHYPOPHARYNX.

labium-hypopharyngeal complex. -- See LABIOHYPOPHARYNX.

lateral arms. -- See LATERAL PRELABIAL TEETH.

lateral groups [of spines]. -- See LATERAL PRELABIAL TEETH 1 and LATERAL PRELABIAL TEETH 3.

lateral lobed processes. -- See LATERAL PRELABIAL TEETH.

lateral lobe-like structures. -- See lobe-like structures.

lateral lobes. -- See LATERAL PRELABIAL TEETH.

LATERAL PRELABIAL TEETH (LPT). -- In dixid and culicid larvae, the bilaterally paired, usually heavily sclerotized and thickened, toothed or tooth-like processes occurring laterally on the midventral region of the labiohypopharynx;

in some culicines the lateral prelabial teeth occur in 3 interconnected groups, lateral prelabial teeth 1-3. (Syn.: lateral lobed processes, Johannsen 1903, at least in part, 417; lateral lobes, Johannsen 1903, at least in part, 424; toothed plates, Wesché 1910, 12; plates of chitin, Wesenberg-Lund 1921, 20; dens of diametrical ring, Becker 1938, 744; serrate, sclerotized plates, Cook 1944, 45; anterior crests, Senevet 1946, 319; labial setae, Schremmer 1950, in part, 403; spiny blade-like structures, Shalaby 1957a, 161; lateral arms, Shalaby 1956, in part, 160; lateral spines, Shalaby 1956, in part, 163; caudo-lateral region [of each paragnathus], Shalaby 1957b, 280; cephalolateral ends, Shalaby 1957c, in part, 437; lateral region [of each paragnathus], Shalaby 1957d, 269; ridge teeth, Menees 1958, in part, 30; glossa, Menees 1958, in part 30; paraglossa, Menees 1958, in part, 30; transverse cephalic region, Shalaby 1959, in part, 210; toothed ridges, Christophers 1960, 208; labial plates, Chaudonneret 1962, 480; serrated sclerites, Pucat 1965, 59; premental plates, Pao and Knight 1970, 132.) See appendix entry, PRELABIAL TEETH.

LATERAL PRELABIAL TEETH 1 (LPT<sub>1</sub>). -- In some culicine larvae, the dorsalmost group of lateral prelabial teeth occurring on the labiohypopharynx; usually connected with the median prelabial teeth, or homologous structures, via the prelabial dental arch. (Syn.: upper row of teeth, Salem 1931, 408; cephalic group [of spiny blade-like structures], Shalaby 1957a, 161; cephalic row [of spines], Shalaby 1957b, in part, 280; lateral groups [of spines], Shalaby 1957b, in part, 280; cephalic lateral group of spines, Shalaby 1957b, in part, 280; lateral spines, Shalaby 1957d, 269; anterolateral toothed premental plate, Pao and Knight 1970, 132; dorsal premental plate, Gardner *et al.* 1973, 171.)

LATERAL PRELABIAL TEETH 2 (LPT<sub>2</sub>). -- In some culicine larvae, the middle group of lateral prelabial teeth occurring on the labiohypopharynx. (Syn.: upper row of teeth, Salem 1931, in part, 408; median group [of spiny blade-like structures], Shalaby 1957a, 161; intermediate row [of spines], Shalaby 1957b, 280; cephalic row [of spines], Shalaby 1957d, 269; midlateral toothed premental plate, Pao and Knight 1970, 132; middle premental plate, Gardner *et al.* 1973, 171.)

LATERAL PRELABIAL TEETH 3 (LPT<sub>3</sub>). -- In some culicine larvae, the ventralmost group of lateral prelabial teeth occurring on the labiohypopharynx. (Syn.: lower row of teeth, Salem 1931, in part, 408; caudal group [of spiny blade-like structures], Shalaby 1957a, 161; caudal row [of spines], Shalaby 1957b, 280; lateral groups [of spines], Shalaby 1957b, in part, 280; caudo-lateral group of spines, Shalaby 1957b, in part, 280; lateral teeth, Chaudonneret 1962, in part, 475; lateral tooth of the labium, Chaudonneret 1962, in part, 485; posterolateral toothed premental plate, Pao and Knight 1970, 132; ventral premental plate, Gardner *et al.* 1973, 171.)

lateral premental plate. -- See ACCESSORY DENTAL PROCESSES.

lateral region [of each paragnathus]. -- See LATERAL PRELABIAL TEETH.

lateral spines. -- See LATERAL PRELABIAL TEETH and LATERAL PRELABIAL TEETH 1.

lateral surface. -- See HYPOPHARYNGEAL MALA.

lateral surface of the hypopharyngeal body. -- See PRELABIAL MALA.

lateral teeth. -- See LATERAL PRELABIAL TEETH 3.

lateral tooth of the labium. -- See LATERAL PRELABIAL TEETH 3.

leaflike structure. -- See PRELABIAL DENTAL LAMELLA.

lobe-like structures. -- Used by Shalaby (1956, 158) to refer to the elevated and folded lateral fleshy margins of the hypopharynx which occur in *Anopheles quadrimaculatus* (Say) and many other culicid larvae. (Syn.: ear-shaped lateral lobes, Shalaby 1957b, 280; lateral lobe-like structures, Shalaby 1957d, 269; valves of the salivary orifice, Gardner *et al.* 1973, 170.)

lower row of teeth. -- See LATERAL PRELABIAL TEETH 3.

lower salivary plate. -- See medial region.

main dorsal part. -- See HYPOPHARYNX.

medial area. -- See medial region.

medial area of hypopharynx. -- See medial region.

medial region. -- Applied by Shalaby (1957a, 161) to the central area of the prelabial part of the labiohypopharynx between the salivary slit and the prelabial cusps and/or prelabial sensoria 1 in *Aedes aegypti* (L.). This area is often rugose. Gardner *et al.* (1973, 170) described it as the "sclerotized corrugated area." (Syn.: lower salivary plate, Chaudonneret 1962, 482; medial area, Pao and Knight 1970, 132; medial area of hypopharynx, Pao and Knight 1970, 133.)

median fossae. -- See PRELABIAL CROWN.

median group [of spiny blade-like structures]. -- See LATERAL PRELABIAL TEETH 2.

MEDIAN PRELABIAL TEETH (MPT). -- In many culicid larvae, a highly variable, usually heavily sclerotized toothed or cusped prominence located between the lateral prelabial teeth of the labiohypopharynx; comprising the unrecognizably fused prelabial cusps, mesal parts of the prelabial dental arches, prelabial denticulus, and the prelabial crown. (Syn.: mesal region of each paragnathus, Shalaby 1957a, 161.) See appendix entry, PRELABIAL TEETH.

median projection. -- See PRELABIAL CROWN.

MEDIAN RAMUS (Mra). -- In culicid larvae, a branch of the cibarial bars extending along the dorsal margin of the prelabial component of the labiohypopharynx; usually indistinct and/or completely incorporated into the prelabium; in dixid larvae, incorporated into the heavily sclerotized dorsolateral part of the prelabium. (Syn.: transverse ridges, Shalaby 1956, 158.)

median tooth. -- See PRELABIAL CROWN.

membranous area. -- See PRELABIAL MEMBRANOUS AREA.

membranous, unpigmented area. -- See PRELABIAL MEMBRANOUS AREA.

mentum. -- See prementum.

mesal region of each paragnathus. -- See MEDIAN PRELABIAL TEETH.

mesal spine. -- See PRELABIAL DENTICULUS.

mesal spines. -- See PRELABIAL DENTICULUS.

microspines. -- Shalaby (1956, 158) applied this term to what he believed to be 3 rows of tiny spine-like processes on the hypopharynx of *Anopheles quadrimaculatus* (Say). We have examined this species and were unable to locate "microspines." We feel that these structures are nothing more than folds which often occur in the lightly sclerotized, almost fleshy surface of the hypopharynx.

middle papillae. -- See PRELABIAL SENSORIUM 4.

middle parts of the mentum. -- See prementum.

middle premental papilla. -- See PRELABIAL SENSORIUM 4.

middle premental papillae. -- See PRELABIAL SENSORIUM 4.

middle premental plate. -- See LATERAL PRELABIAL TEETH 2.

midlateral toothed premental plate. -- See LATERAL PRELABIAL TEETH 2.

minute spines. -- See PRELABIAL CUSPS.

mouth cavity. -- See PREORAL CAVITY.

movable spines. -- See PRELABIAL SENSORIUM.

nodules. -- See PRELABIAL MALA.

opening of the salivary duct. -- See SALIVARY ORIFICE.

opening of the salivary glands. -- See SALIVARY ORIFICE.

orifice of the common salivary duct. -- See SALIVARY ORIFICE.

orifice of the salivary duct. -- See SALIVARY ORIFICE.

orifice of the salivary gland duct. -- See SALIVARY ORIFICE.

oval, thinly chitinized places. -- See PRELABIAL MEMBRANOUS AREA.



oval windows. -- See PRELABIAL MEMBRANOUS AREA.

papillae. -- See PRELABIAL SENSORIUM.

papillae of prementum. -- See PRELABIAL SENSORIUM.

papilla-like process. -- See PRELABIAL SENSORIUM 1.

paraglossa. -- See LATERAL PRELABIAL TEETH, PRELABIAL DENTICULUS, PRELABIAL CROWN, and PRELABIAL RIDGE TEETH.

paragnatha. -- See prementum.

peg-like processes. -- See PRELABIAL CROWN and PRELABIAL SENSORIUM.

peg-like structures. -- See PRELABIAL CROWN and PRELABIAL SENSORIUM.

pharyngeal plate. -- See LABIOHYPOPHARYNX.

plate. -- See prementum.

plates of chitin. -- See LATERAL PRELABIAL TEETH.

posterior crests. -- See PRELABIAL SENSORIUM 1.

posterolateral toothed premental plate. -- See LATERAL PRELABIAL TEETH 3.

pouch-shaped outgrowth. -- See PRELABIAL CORDATE PROCESS.

PRELABIAL APODEME (PAP). -- Observable in some culicid larvae, a small cuticular ingrowth located at the middle of the lateral margins of the prelabial component of the labiohypopharynx; receiving the insertion of the cranial adductors. (Syn.: protuberance for insertion of muscles of hypopharynx, Becker 1938, 744; hypopharyngeal apodemes, Gardner *et al.* 1973, 170.)

PRELABIAL CORDATE PROCESS (PCP). -- In anopheline larvae, a large heart-shaped flap-like structure located dorsal to and closely associated with the prelabial outgrowths; the reduced homologous structure in culicines, when present, is considered as one of the prelabial outgrowths. (Syn.: semi-circular plates, Puri 1931, in part, 28; pouch-shaped outgrowth; Becker 1938, 744; heart-shaped flap, Farnsworth 1947, 144; chitinous lamella, Schremmer 1949, 200; heart-shaped structure, Menees 1958, 30; labial palpi, Menees 1958, 30.) The "premental spine" of Pao and Knight (1970, 132) appears to be homologous with the anopheline structure, but owing to its reduced nature in culicines we prefer to include the structure with the prelabial outgrowths (see PRELABIAL OUTGROWTHS).

PRELABIAL CROWN(PCr). -- In anopheline and some culicine larvae, an elevated, usually cusped tongue-like structure located between the median prelabial tooth and the prelabial outgrowths of the labiohypopharynx; in other culicines it is unrecognizably fused with the prelabial cusps, prelabial denticulus, and the mesal parts of the prelabial dental arches to form the complex of

median prelabial teeth; believed to be at least partly homologous with a narrow toothed ridge located ventral to the median prelabial tooth in some dixids. (Syn.: three-pointed process, Wesché 1910, 12; central process, Wesché 1910, 12; median tooth, Puri 1931, 28; peg-like structures, Salem 1931, in part, 404; peglike processes, Salem 1931, in part, 408; bi-apical dens, Becker 1938, 744; median projection, Farnsworth 1947, 144; toothed ridge, Schremmer 1949, in part, 200; caudal arm, Shalaby 1956, 160; ridge teeth, Menees 1958, in part, 30, paraglossa, Menees 1958, in part, 30; glossa, Menees 1958, in part, 30; premental pouches, Pao and Knight 1970, in part, 132; median fossae, Gardner *et al.* 1973, 171.) See appendix entry, PRELABIAL TEETH.

PRELABIAL CUSPS (PCu). -- In dixid and some culicid larvae, a grouping of nodule-, spine-, or tubercle-like processes located centrally on the prelabial part of the labiohypopharynx; in dixid and some culicine larvae the cusps are located ventral to the salivary slit and/or between prelabial sensoria 1 and may be homologous with some of the denticles occurring on the prelabial malae of anophelines; incorporated, at least in part, into the complex of median prelabial teeth found in many culicines. (Syn.: curved plate with spines, Wesché 1910, in part, 12; minute spines, Salem 1931, 403; hypopharyngeal spines, Shalaby 1957a, 161.)

PRELABIAL DENTAL ARCH (PDA). -- In many culicid larvae, a heavily sclerotized, curved ridge- or rod-like thickening connecting the lateral and medial prelabial teeth dorsally; often grooved and/or bearing small dentiform processes; sometimes united with the median prelabial teeth only; apparently poorly developed or unrecognizable in most anophelines. (Syn.: curved plate with spines, Wesché 1910, in part, 12; dorsal fossa, Gardner *et al.* 1973, 171.)

PRELABIAL DENTAL LAMELLA (PDL). -- In anopheline larvae, usually a scale- or leaf-like process arising from the membranous area on either side of the prelabial crown. (Syn.: leaflike structure, Farnsworth 1947, 144; fingerform organ, Schremmer 1949, 200.)

PRELABIAL DENTICULUS (PD). -- In dixid, anopheline, and some culicine larvae, a cusped process located centrally on the prelabial part of the labiohypopharynx; in anopheline larvae, located between the lateral prelabial teeth; in dixids and culicines, located immediately ventral to the prelabial cusps; unrecognizably incorporated into the complex of median prelabial teeth found in many culicines. (Syn.: tri-apical dens, Becker 1938, in part, 744; series of heavy teeth, Farnsworth 1947, in part, 144; toothed ridge, Schremmer 1949, in part, 200; labial teeth, Schremmer 1950, in part, 403; mesal spines, Shalaby 1957b, 280; mesal spine, Shalaby 1957d, 269; ridge teeth, Menees 1958, in part, 30; glossa, Menees 1958, in part, 30, paraglossa, Menees 1958, in part, 30; premental pouches, Pao and Knight 1970, in part 132; central cusps, Gardner *et al.* 1973, 171.)

PRELABIAL MALA (pLbM). -- In anopheline and certain culicine larvae, one of a pair of denticulate tritural surfaces situated on either side of the midline of the labiohypopharynx between the salivary slit and the lateral prelabial teeth; functionally but not structurally homologous with the hypopharyngeal malae of dixids; the accessory teeth of the mandibles occlude with the prelabial malae. (Syn.: nodules, Puri 1931, in part, 28; teeth, Cook 1944, in part, 47; tooth-like spines, Farnsworth 1947, in part, 144; lateral surface of the hypopharyngeal body, Schremmer 1949, 200; hypopharyngeal spines, Shalaby 1956, in part, 160; sides of hypopharynx, Menees 1958, 30.) See appendix entry, MALA.

PRELABIAL MEMBRANOUS AREA (PMA). -- In dixid and culicid larvae, a poorly sclerotized membrane-like zone of cuticle located between the median prelabial teeth, or homologous structures, and the lateral prelabial teeth of the labiohypopharynx; bearing prelabial sensoria 2-5; unpaired in some dixids. (Syn.: clear circular areas, Puri 1931, 28; clear patches, Puri 1931, 28; window of hypopharynx, Becker 1938, 744; transparent zone, Senevet 1946, 319; membranous area, Farnsworth 1947, 144; window-like openings, Schremmer 1949, 201; oval, thinly chitinized places, Schremmer 1949, 201; oval windows, Schremmer 1949, 201; membranous, unpigmented area, Shalaby 1956, 160; intermediate region [of each paragnathus], Shalaby 1957a, 161; circular pigmented area, Shalaby 1957c, 438; labial palp, Chaudonneret 1962, 475.)

PRELABIAL OUTGROWTHS (PO). -- In dixid and culicid larvae, a variable collection of scale-, hair-, and/or spine-like processes borne on the ventral margin of the labiohypopharynx. (Syn.: central brush of spines, Wesché 1910, 12; circle of hairs, Wesenberg-Lund 1921, 20; semi-circular plates, Puri 1931, in part, 28; hairs, Salem 1931, 408; fimbriae, Cook 1944, 45; anterior organ, Senevet 1946, 319; sclerotized teeth, Farnsworth 1947, 144; labial setae, Schremmer 1950, in part, 403; caudal spines, Shalaby 1957a, 161; triangular shaped structure, Shalaby 1957b, 280; apically serrated hairs, Pucat 1965, 59; premental spine, Pao and Knight 1970, in part, 132; premental scales, Pao and Knight 1970, in part, 132; premental hairs, Pao and Knight 1970, in part, 132; Gardner *et al.* 1973, 171.) See appendix.

PRELABIAL RIDGE TEETH (PRT). -- In anopheline larvae, several large tooth-like processes located along the elevated midline of the prelabial component of the labiohypopharynx between the prelabial malae. (Syn.: tri-apical dens, Becker 1938, in part, 744; series of heavy teeth, Farnsworth 1947, in part, 144; ridge teeth, Schremmer 1949, in part, 200 and Menees 1958, in part, 30; teeth, Shalaby 1956, 160; glossa, Menees 1958, in part, 30; paraglossa, Menees 1958, in part, 30.)

PRELABIAL SENSORIUM (PS). -- In general, any innervated cuticular structure occurring on the insect prelabium. In certain nematocerous larvae, one of the sensoria occurring on the labiohypopharynx. Specifically in culicid larvae, one of usually five bilaterally paired sensoria occurring on the labiohypopharynx. (Syn. for nematocerous larvae: spurs, Raschke 1887, 11; spines, Johannsen 1903, 417; papillae, Mundy 1909, 20; "taste hairs," Wesché 1910, 12; hairs, Wesché 1910, in part, 12; sensory papillae, de Meijere 1917, 184; thorns of chitin, Wesenberg-Lund 1921, 20; sensory papilla, Puri 1925, 309; peg-like structures, Salem 1931, in part, 404; peg-like processes, Salem 1931, in part, 408; sensory tubercles ("Sinneswarzen"), Anthon 1943, 316; appendages, Senevet 1946, 319; sensory pegs, Schremmer 1950, 403; movable spines, Shalaby 1956, 160; sensory cones, Strenzke 1960, 19; basiconic sensilla, Chance 1970, 259; papillae of prementum, Couvert 1970, 185; sensillae basiconicae, Mozley 1970, 442; premental papillae, Pao and Knight 1970, in part, 132; labial sensilla, Mozley 1971, 302; sensillae of the labium, Mozley 1971, 303; sensillar of labium, Saether 1971, 1257.) See appendix.

PRELABIAL SENSORIUM 1(PS<sub>1</sub>). -- In dixid and culicid larvae, one of the dorsal-most pair of innervated cone or peg-like cuticular structures occurring on the prelabial part of the labiohypopharynx; in anopheline larvae, located between

the salivary slit and the prelabial malae; in dixid and some culicine larvae, located near or closely associated with the dorsal prelabial teeth; in most culicine larvae, located in various positions between the salivary slit and the prelabial dental arches. (Syn.: spines, Wesché 1910, 12; blunt anterior processes, Salem 1931, 408; posterior crests, Senevet 1946, 321; hypopharyngeal processes, Shalaby 1957a, 161; hypopharyngeal spines, Shalaby 1957d, 269; papilla-like process, Pucat 1965, 60; hypopharyngeal peglike processes, Pao and Knight 1970, 132.)

PRELABIAL SENSORIUM 2 (PS<sub>2</sub>). -- In dixid and culicid larvae, the dorsalmost innervated peg-like cuticular structure occurring on the prelabial membranous area of the labiohypopharynx; in many culicines PS<sub>2</sub> is paired with PS<sub>3</sub> and PS<sub>2</sub> is the more mesal of the two. (Syn.: two-ended processes, Wesché 1910, in part, 12; apical papillae, Pao and Knight 1970, in part, 132; apical premental papilla, Pao and Knight 1970, in part, 133; dorsal premental papillae, Gardner *et al.* 1973, 171.)

PRELABIAL SENSORIUM 3 (PS<sub>3</sub>). -- In dixid and culicid larvae, an innervated peg-like cuticular structure located immediately ventral to PS<sub>2</sub> on the prelabial membranous area of the labiohypopharynx; in many culicines PS<sub>3</sub> is paired with PS<sub>2</sub> and PS<sub>3</sub> is the more lateral of the two. (Syn.: two-ended processes, Wesché 1910, in part, 12; apical papillae, Pao and Knight 1970, in part, 132; apical premental papilla, Pao and Knight 1970, in part, 133; dorsal premental papilla, Gardner *et al.* 1973, 171.)

PRELABIAL SENSORIUM 4 (PS<sub>4</sub>). -- In culicid and certain dixid larvae, an innervated peg-like cuticular structure located immediately dorsal to PS<sub>5</sub> on the prelabial membranous area of the labiohypopharynx. (Syn.: middle papillae, Pao and Knight 1970, 132; middle premental papilla, Pao and Knight 1970, 134; middle premental papillae, Gardner *et al.* 1973, 171.)

PRELABIAL SENSORIUM 5 (PS<sub>5</sub>). -- In dixid and culicid larvae, the ventralmost innervated peg-like cuticular structure located on the prelabial membranous area of the labiohypopharynx. (Syn.: basal papillae, Pao and Knight 1970, 132; basal premental papilla, Pao and Knight 1970, 133; ventral premental papillae, Gardner *et al.* 1973, 171.)

PRELABIUM (pLb). -- In generalized insects "the distal part of the labium, comprising the prementum, the ligula [glossae and paraglossae], and the palpi" (Snodgrass 1935, 156). In culicid and certain other nematocerous larvae, separated from the hypopharynx by the salivary slit, but united with it latero-posteriorly by the cibarial bars to form the labiohypopharynx. See appendix entry, LABIOHYPOPHARYNX.

premental papillae. -- See PRELABIAL SENSORIUM.

premental hairs. -- See PRELABIAL OUTGROWTHS.

premental plates. -- See LATERAL PRELABIAL TEETH.

premental pouches. -- See PRELABIAL DENTICULUS and PRELABIAL CROWN.

premental scales. -- See PRELABIAL OUTGROWTHS.

premental spine. -- See PRELABIAL CORDATE PROCESS and PRELABIAL OUTGROWTHS.

prementohypopharyngeal complex. -- See LABIOHYPOPHARYNX.

prementum. -- See LABIOHYPOPHARYNX and prementum.

prementum. -- Apparently first applied by de Meijere (1917, 252) to the assemblage of toothed processes and associated lateral and ventral structures found in certain larval dipterans; first applied to the homologous structures in culicid larvae by Puri (1931, 28). By definition this term does not include the dorsal part of the prelabium as defined herein. (Syn.: middle parts of the mentum, Raschke 1887, 30; labium, Thompson 1905, 169; saddle-shaped sclerite, Thompson 1905, 170; mentum, Mundy 1909, 20; plate, Wesenberg-Lund 1921, 20; paragnatha, Shalaby 1957a, 161; spiny and sclerotized structures, Shalaby 1957d, 266; ventral part, Shalaby 1957d, 268; hypopharynx, Menees 1958, in part, 33; labial plate, Christophers 1960, 208; labial lobe, Chance 1970, 259.) See appendix entry, LABIOHYPOPHARYNX.

PREORAL CAVITY (PrC). -- In culicid larvae (Christophers 1960, 205), the largely closed-in space formed on the undersurface of the anterior region of the head by the palatum, mandibles, maxillae, dorsomentum, and labiohypopharynx; receiving posteriorly the wide slit-like opening of the pharynx, the true mouth. (Syn.: mouth cavity, Salem 1931, 410.)

protuberance for insertion of muscles of hypopharynx. -- See PRELABIAL APODEME.

ridge teeth. -- See LATERAL PRELABIAL TEETH, PRELABIAL DENTICULLUS, PRELABIAL CROWN, and PRELABIAL RIDGE TEETH.

saddle-shaped sclerite. -- See prementum.

salivary duct opening. -- See SALIVARY ORIFICE.

salivary duct orifice. -- See SALIVARY ORIFICE.

salivary gland canal. -- See SALIVARY ORIFICE.

salivary opening. -- See SALIVARY ORIFICE.

salivary orifice. -- See SALIVARY SLIT.

SALIVARY ORIFICE (SO). -- In generalized insects, the opening of the salivary duct(s) into the salivarium. In culicid (Snodgrass 1959, 19) and certain other nematoceros larvae, the common duct terminates (opens) into the floor of a slit-like space or channel, the salivary slit, located between the hypopharynx and prelabium; usually not directly observable. (Syn.: orifice of the salivary duct, Thompson 1905, 170; opening of the salivary glands, Puri 1931, 28; opening of the salivary duct, Salem 1931, 409; salivary duct opening, Cook 1944, 45; orifice of the common salivary duct, Farnsworth 1947, 144; salivary duct orifice, Farnsworth 1947, 147; salivary gland canal, Schremmer 1949, 200;

orifice of the salivary gland duct, Schremmer 1950, 402; salivary opening, Shalaby 1957c, 437; opening of the common salivary duct, Christophers 1960, 208; salivary outlet, Mozley 1971, 302.)

salivary outlet. -- See SALIVARY ORIFICE.

SALIVARY SLIT (SS1). -- In culicid, dioxid, and certain other nematoceros larvae (Puri 1925, 309), the slit-like space or channel located between the hypopharynx and prelabium; the salivary duct terminates in the floor of the salivary slit. (Syn.: salivary orifice, Chaudonneret 1962, 474 and Gardner *et al.* 1973, 170.) See appendix.

sclerotized teeth. -- See PRELABIAL OUTGROWTHS.

semi-circular plates. -- See PRELABIAL CORDATE PROCESS and PRELABIAL OUTGROWTHS.

sensillae basiconicae. -- See PRELABIAL SENSORIUM.

sensillae of the labium. -- See PRELABIAL SENSORIUM.

sensillar of labium. -- See PRELABIAL SENSORIUM.

sensory cones. -- See PRELABIAL SENSORIUM.

sensory papilla. -- See PRELABIAL SENSORIUM.

sensory papillae. -- See PRELABIAL SENSORIUM.

sensory pegs. -- See PRELABIAL SENSORIUM.

sensory tubercles ("Sinneswarzen"). -- See PRELABIAL SENSORIUM.

series of heavy teeth. -- See PRELABIAL DENTICULUS and PRELABIAL RIDGE TEETH.

serrated sclerites. -- See LATERAL PRELABIAL TEETH.

serrate, sclerotized plates. -- See LATERAL PRELABIAL TEETH.

sides of hypopharynx. -- See PRELABIAL MALA.

spines. -- See PRELABIAL SENSORIUM and PRELABIAL SENSORIUM 1.

spiny and sclerotized structures. -- See prementum.

spiny blade-like structures. -- See LATERAL PRELABIAL TEETH.

spurs. -- See PRELABIAL SENSORIUM.

"taste hairs". -- See PRELABIAL SENSORIUM.

teeth. -- See PRELABIAL MALA and PRELABIAL RIDGE TEETH.

thorns of chitin. -- See PRELABIAL SENSORIUM.

three-pointed process. -- See PRELABIAL CROWN.

toothed plates. -- See LATERAL PRELABIAL TEETH.

toothed ridge. -- See PRELABIAL DENTICULUS and PRELABIAL CROWN.

toothed ridges. -- See LATERAL PRELABIAL TEETH.

tooth-like spines. -- See PRELABIAL MALA.

transparent zone. -- See PRELABIAL MEMBRANOUS AREA.

transverse cephalic region. -- See LATERAL PRELABIAL TEETH.

transverse ridges. -- See MEDIAN RAMUS.

triangular shaped structure. -- See PRELABIAL OUTGROWTHS.

tri-apical dens. -- See PRELABIAL DENTICULUS and PRELABIAL RIDGE TEETH.

two-ended processes. -- See PRELABIAL SENSORIUM 2 and PRELABIAL SENSORIUM 3.

upper row of teeth. -- See LATERAL PRELABIAL TEETH 1 and LATERAL PRELABIAL TEETH 2.

upper salivary plate. -- See HYPOPHARYNGEAL BAR.

valves of the salivary orifice. -- See lobe-like structures.

ventral part. -- See prementum.

ventral premental papillae. -- See PRELABIAL SENSORIUM 5.

ventral premental plate. -- See LATERAL PRELABIAL TEETH 3.

VENTRAL RAMUS (VRa). -- In culicid larvae, a branch of the cibarial bars extending along the lateral margins of the labiohypopharynx; well sclerotized and easily observed in most anophelines, but usually weakly developed or unrecognizable in culicines; in dixids, incorporated into the heavily sclerotized ventrolateral part of the prelabial component of the labiohypopharynx.

ventrolateral plate. -- Used by Pao and Knight (1970, 132) to refer to the areas of the prelabial part of the labiohypopharynx lateral to the lateral prelabial teeth and ventral to the salivary slit in *Aedes vexans* (Meigen). Although this area often appears to have a number of rod or spindle-shaped markings in the light microscope and often appears rugose in the scanning electron microscope, we do not believe it necessary to refer to it by a special name. (Syn.: ventrolateral plate of hypopharynx, Pao and Knight 1970, 134.)

ventrolateral plate of hypopharynx. -- See ventrolateral plate.

window-like openings. -- See PRELABIAL MEMBRANOUS AREA.

window of hypopharynx. -- See PRELABIAL MEMBRANOUS AREA.

Fig. 70. *Paradixa neozelandica* Tennoir. Labiohypopharynx of fourth stage larva.

a. Anterior aspect.

b. Lateral aspect (right side).

#### ABBREVIATIONS

*CB = cibarial bar	PD = prelabial denticulus
DPT = dorsal prelabial teeth	pLb = prelabium
DRa = dorsal ramus	PMA = prelabial membranous area
Hy = hypopharynx	PO = prelabial outgrowths
HyM = hypopharyngeal mala	**PS <sub>1</sub> = prelabial sensorium 1
LPT = lateral prelabial teeth	PS <sub>2</sub> = prelabial sensorium 2
PCr = prelabial crown	PS <sub>3</sub> = prelabial sensorium 3
PCu = prelabial cusps	PS <sub>5</sub> = prelabial sensorium 5
	SS1 = salivary slit

\* Defined in Part IX (Laffoon and Knight 1973, 35).

\*\* Although this structure is similar in appearance to adjacent cusps, it can be recognized as a sensorium in SEM micrographs. It is typically peg-like in *Dixa* and *Nothodixa* species.



Fig. 70

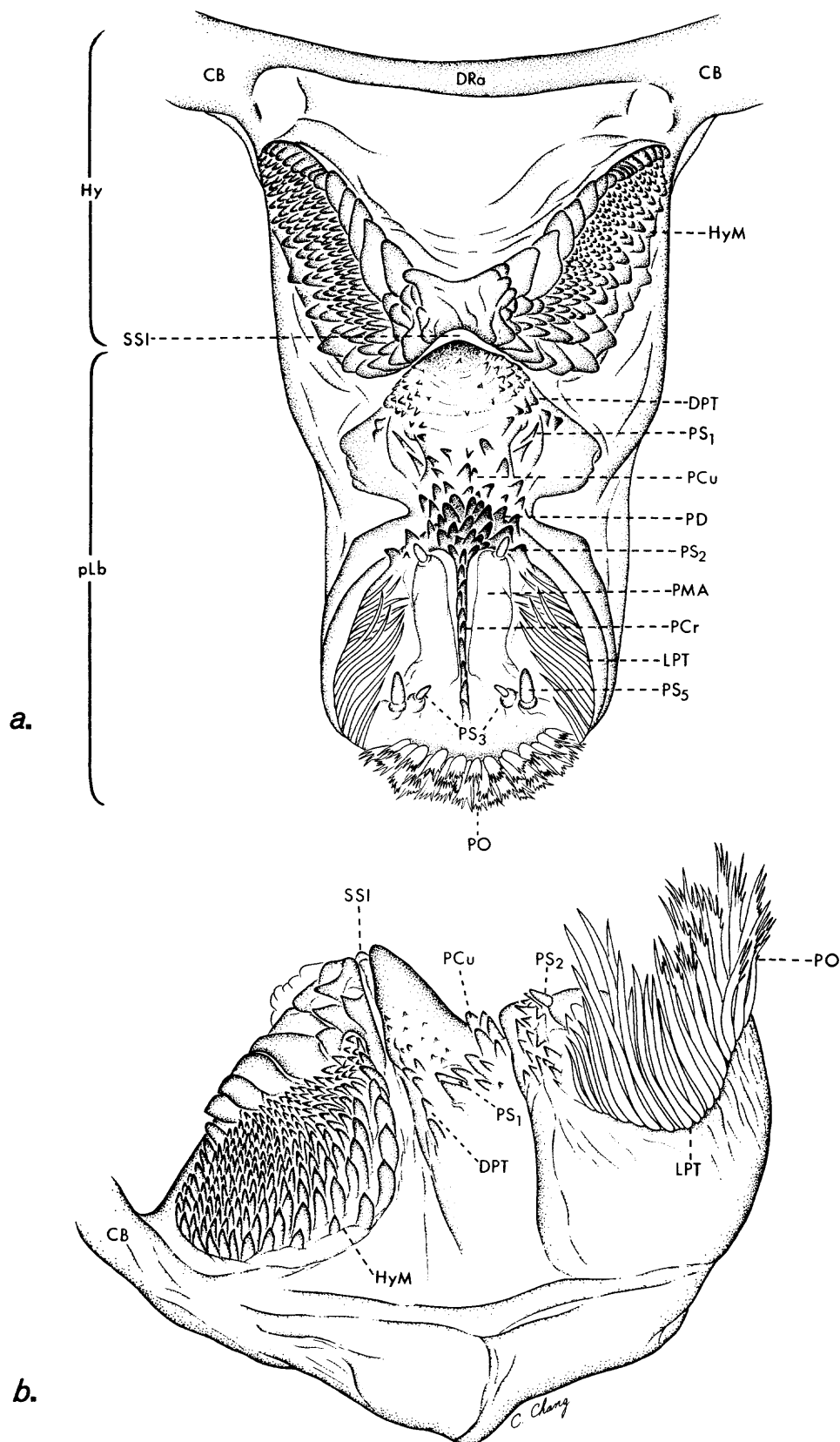


Fig. 71. *Anopheles (Nyssorhynchus) albimanus* Wiedemann. Labiohypopharynx of fourth stage larva.

- a. Anterior aspect.
- b. Lateral aspect (right side).

#### ABBREVIATIONS

*CB = cibarial bar	pLbM = prelabial mala
DRa = dorsal ramus	PMA = prelabial membranous area
Hy = hypopharynx	PO = prelabial outgrowths
LPT = lateral prelabial teeth	PRT = prelabial ridge teeth
MRa = median ramus	PS <sub>1</sub> = prelabial sensorium 1
PCP = prelabial cordate process	PS <sub>2</sub> = prelabial sensorium 2
PCr = prelabial crown	PS <sub>3</sub> = prelabial sensorium 3
PD = prelabial denticulus	PS <sub>4</sub> = prelabial sensorium 4
PDL = prelabial dental lamella	PS <sub>5</sub> = prelabial sensorium 5
pLb = prelabium	SS1 = salivary slit
	VRa = ventral ramus

\*Defined in Part IX (Laffoon and Knight 1973, 35).

Fig. 71

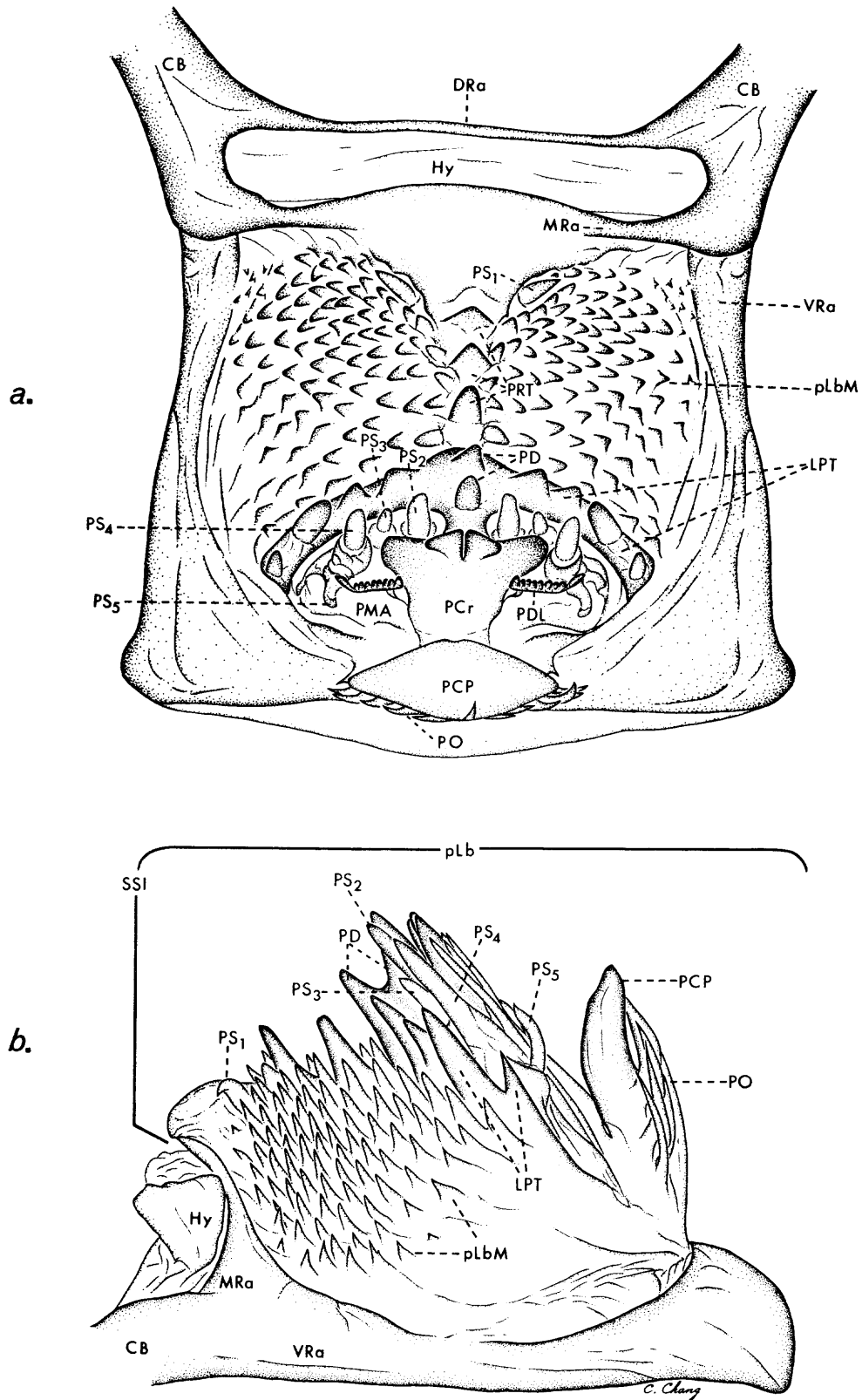


Fig. 72. *Opiifex fuscus* Hutton. Labiohypopharynx of fourth stage larva.

a. Anterior aspect.

b. Lateral aspect (right side).

## ABBREVIATIONS

ADP	= accessory dental processes	PDA	= prelabial dental arch
*CB	= cibarial bar	pLb	= prelabium
DRa	= dorsal ramus	pLbM	= prelabial mala
Hy	= hypopharynx	PMA	= prelabial membranous area
HyB	= hypopharyngeal bar	PO	= prelabial outgrowths
LPT <sub>1</sub>	= lateral prelabial teeth 1	PS <sub>1</sub>	= prelabial sensorium 1
LPT <sub>2</sub>	= lateral prelabial teeth 2	PS <sub>2</sub>	= prelabial sensorium 2
LPT <sub>3</sub>	= lateral prelabial teeth 3	PS <sub>3</sub>	= prelabial sensorium 3
MRa	= median ramus	PS <sub>4</sub>	= prelabial sensorium 4
PCr	= prelabial crown	PS <sub>5</sub>	= prelabial sensorium 5
PCu	= prelabial cusps	SSl	= salivary slit
PD	= prelabial denticulus	VRa	= ventral ramus

\*Defined in Part IX (Laffoon and Knight 1973, 35).

**Fig. 72**

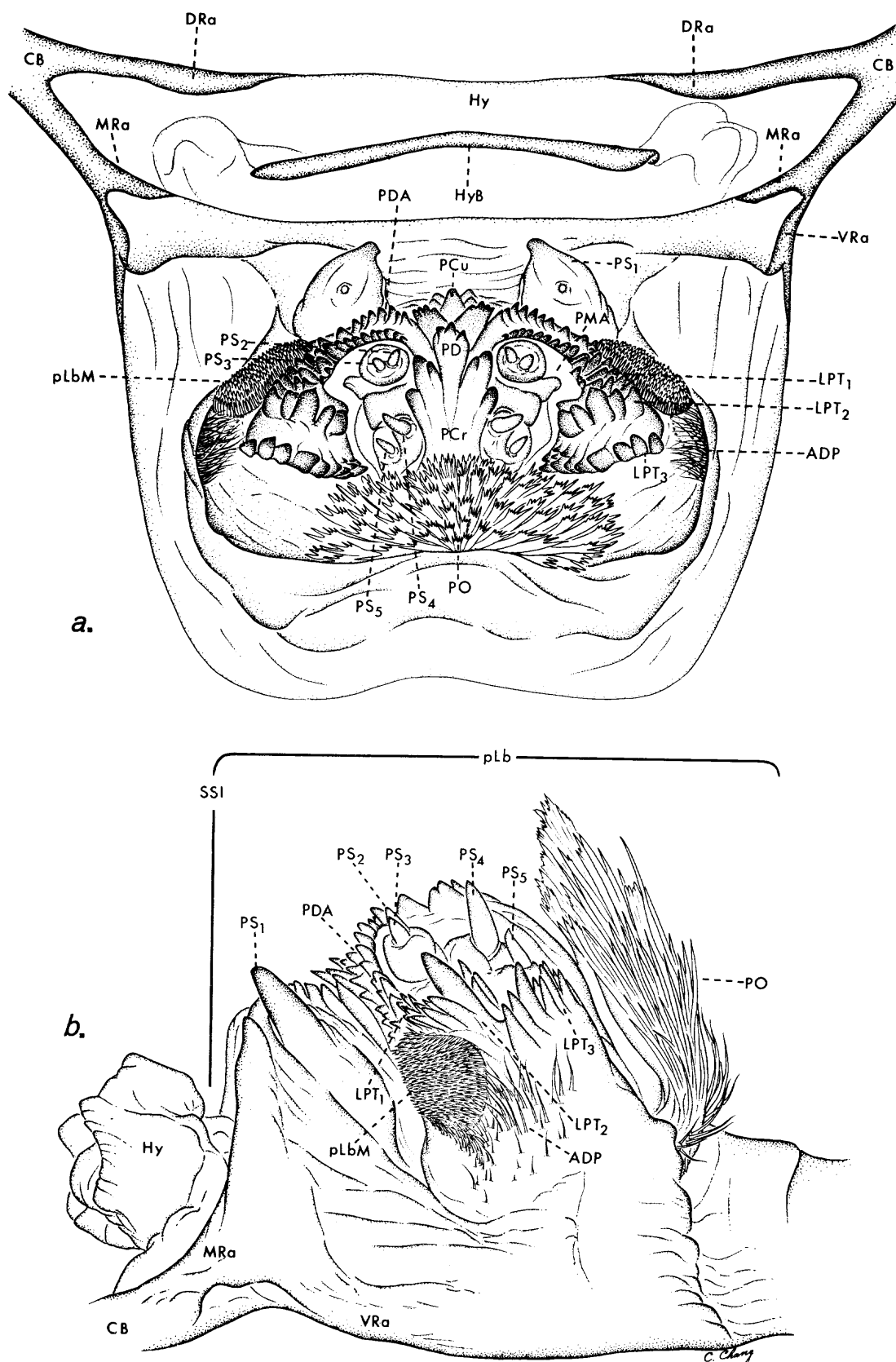


Fig. 73. *Aedes (Oclerotatus) canadensis* (Theobald). Labiohypopharynx of fourth stage larva.

a. Anterior aspect.

b. Lateral aspect (right side).

Fig. 74 *Toxorhynchites (Toxorhynchites) brevialpis* Theobald. Anterior aspect of the labiohypopharynx of the fourth stage larva.

#### ABBREVIATIONS

ADP = accessory dental processes	PCu = prelabial cusps
*CB = cibarial bar	PD = prelabial denticulus
DRa = dorsal ramus	PDA = prelabial dental arch
Hy = hypopharynx	pLb = prelabium
HyB = hypopharyngeal bar	PMA = prelabial membranous area
LPT = lateral prelabial teeth	PO = prelabial outgrowths
LPT <sub>1</sub> = lateral prelabial teeth 1	PS <sub>1</sub> = prelabial sensorium 1
LPT <sub>2</sub> = lateral prelabial teeth 2	PS <sub>2</sub> = prelabial sensorium 2
LPT <sub>3</sub> = lateral prelabial teeth 3	PS <sub>3</sub> = prelabial sensorium 3
MPT = median prelabial teeth	PS <sub>4</sub> = prelabial sensorium 4
MRa = median ramus	PS <sub>5</sub> = prelabial sensorium 5
PCr = prelabial crown	SSl = salivary slit
	VRa = ventral ramus

\*Defined in Part IX (Laffoon and Knight 1973, 35).

Fig. 73

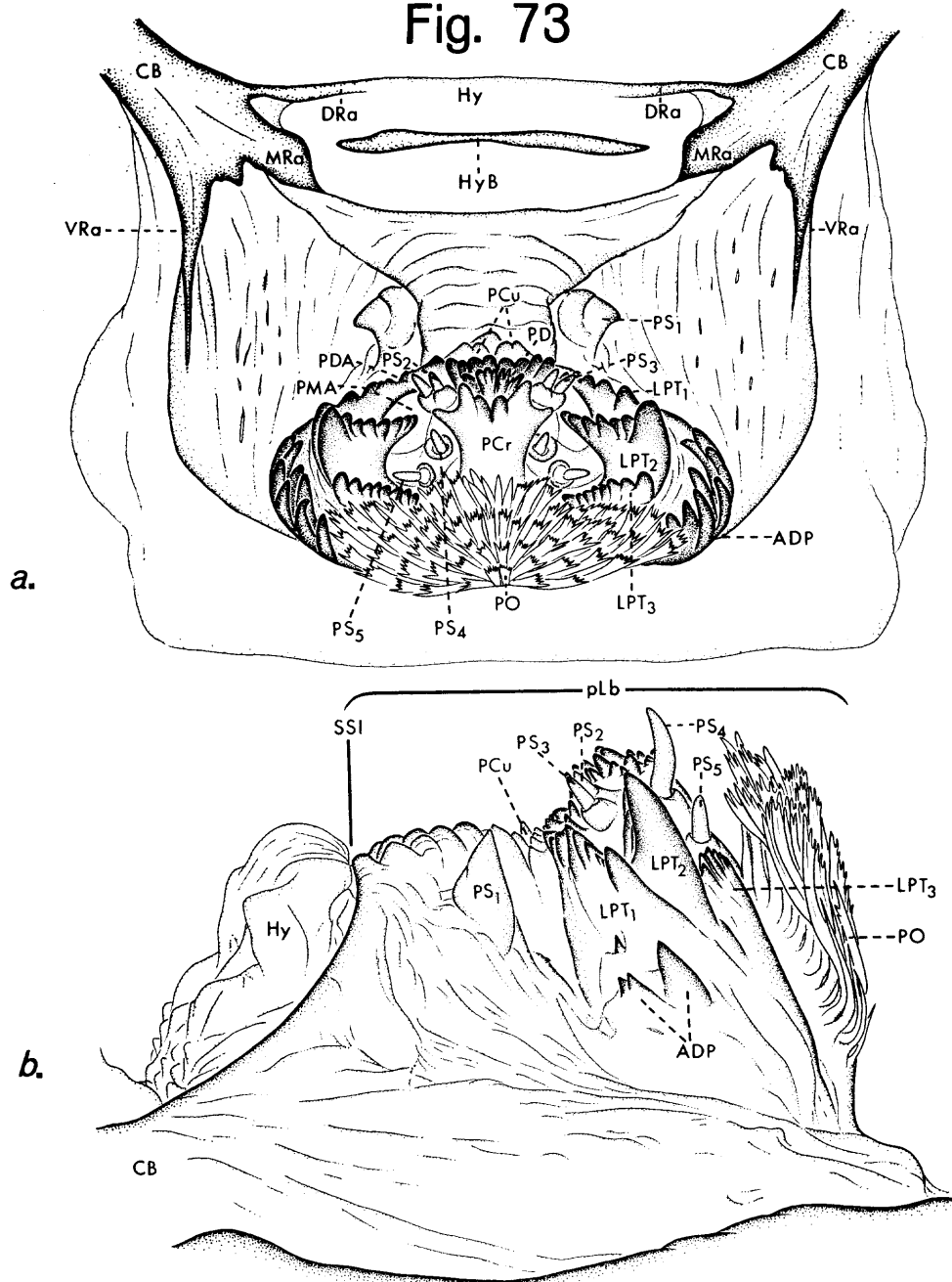
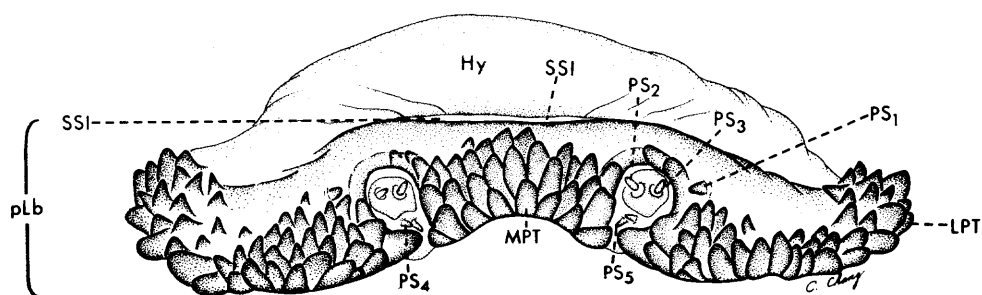


Fig. 74



## APPENDIX

As previously, this part is appended for the purpose of explaining: 1) the introduction of new terms, 2) the recommendation of terms currently not widely accepted for use in the Culicidae, and 3) the derivation of terms where appropriate.

ACCESSORY DENTAL PROCESSES. -- We propose this new term because its synonyms are considered by us to be unsuitable. The "spines" mentioned in the works of Shalaby are spine-like projections but not true spines. The "lateral premental plate" of Gardner *et al.* (1973, 171) indicates position but the term "plate" incorrectly refers to the sclerotized and thickened area of cuticle which bears the projections rather than a broad, flattened, well-delineated piece of cuticle. Since the projections are variable in form and lie adjacent to the lateral prelabial teeth, we have chosen to call them ACCESSORY DENTAL PROCESSES, a term which is general enough to be applicable in all cases.

DORSAL PRELABIAL TEETH. -- Applied here to a previously undescribed series of teeth-like projections located dorsal to the other tooth-like processes borne by the prelabial component of the labiohypopharynx.

HYPOPHARYNGEAL BAR. -- Proposed as a replacement for "upper salivary plate" (Chaudonneret 1962, 482) and "chitinous cover" (Pao and Knight 1970, 132). The term describes the location and nature of the structure.

LABIOHYPOPHARYNX. -- Most recent authors, including Snodgrass (1959), are of the belief that the labium and hypopharynx in larval culicids are united into a single postoral lobe upon which the duct of the salivary gland opens. Most earlier authors disagree with this interpretation and Snodgrass must not have been in complete agreement with it himself because he stated that the salivary duct of *Toxorhynchites rutilus* opens "between the two component parts" (Snodgrass 1959, 19). We interpret "the two component parts" to be the hypopharyngeal and labial components of the labiohypopharynx.

According to Laffoon and Knight (1973), the mental and submental parts of the postlabium have been incorporated into the ventral margin of the larval culicid cranium. These parts are now referred to as the dorsomentum, the ventromentum, and the submentum. Following this interpretation, we feel that the prelabium, comprising the prementum, glossae, paraglossae, and the labial palpi, forms the labial component of the labiohypopharynx. Many culicid morphologists believe that the labial component is entirely prementum but one wonders what has happened to the other prelabial parts. Some authors support the idea that the sensoria borne on the prelabial membranous areas "represent the labial palpi" (Christophers 1960, 208) and Menees (1958, 33) believes that the glossae, paraglossae, and labial palpi "form the body of the prementum." For simplicity we prefer to call the labial component the PRELABIUM.

Authors who have applied the term prementum were of the belief that the structures designated herein as prelabial sensoria 1 belong to the hypopharyngeal component of the labiohypopharynx. Since Yin (1970) has shown that the neurons which innervate these structures are supplied by the labial nerve, this supports our claim that the labial part is that component ventral to the salivary slit rather than just that part which bears the toothed processes or the toothed



processes by themselves. That part dorsal to the salivary slit is obviously the HYPOPHARYNX. In other words, as is true in most insects, the salivary orifice is located between the hypopharynx and the labium. Since in culicid larvae these are joined laterally by the cibarial bars, the composite structure is still called the LABIOHYPOPHARYNX.

MALA. -- Smith (1906, 77) defined a "mala" as "a lobe: a ridged or grinding surface." We have employed the term to indicate that surface of the labiohypopharynx upon which food particles are crushed by the accessory teeth of a mandible, specifically the HYPOPHARYNGEAL MALA in dipterid larvae and the PRELABIAL MALA in anopheline and some culicine larvae. These malae are functionally homologous, but based on their relationship to the salivary slit and prelabial sensoria 1 we do not believe that they are structurally homologous.

PRELABIAL OUTGROWTHS. -- These structures have been variously referred to as "spines," "hairs," "fimbriae," "teeth," "setae," and "scales" -- terms which attest to their variability of form and to the difficulty encountered when trying to apply a single name to the homologous structures in all taxa. The structures often appear to be unicellular and could easily be called setae, but they sometimes appear to be multicellular processes as well. For general applicability, we have chosen to call the structures simply "outgrowths" and to add the modifier "prelabial" in order to indicate their location on the labiohypopharynx.

PRELABIAL SENSORIUM. -- Yin (1970) has shown that all of the sensory structures occurring on the labiohypopharynx are innervated by branches of the labial nerve. In accordance with the practice initiated in Part XI (Harbach and Knight 1977, 169), we prefer that the external cuticular parts of these sensilla be referred to as "sensoria" rather than the numerous previously used terms. We have added the modifier "prelabial" to indicate their location on the prelabial part of the labiohypopharynx.

PRELABIAL TEETH. -- Those structures which we have chosen to call "teeth" are invariably tooth-like, and in non-predatory culicid larvae, the mandibular teeth occlude with or between these structures. There are basically 3 groups of teeth: 2 groups of LATERAL PRELABIAL TEETH and a group of MEDIAN PRELABIAL TEETH. Each of these is usually subdivided into a number of toothed or tooth-like processes, usually ridges, crests, or other projecting forms. When distinguishable, a cusped prominence which forms part of the complex of MEDIAN PRELABIAL TEETH and is usually the highest part or projection of the prelabial component of the labiohypopharynx is called the PRELABIAL CROWN.

SALIVARY SLIT. -- This slit-like space or channel located between the hypopharynx and prelabium may represent either the salivarium or the salivary meatus as defined by Snodgrass (1935, 128 and 281, respectively). Although we feel that it is probably the latter, we have chosen to use Puri's term because it accurately conveys the shape of the channel and the appearance of its external opening.

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